

REMARKS:

Claims 12-15 and 26-27

Claims 12-15 and 26-27 have been objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 12-15 and 26-27 were previously amended in a manner believed to obviate the objection. Particularly, the claims were amended to define a specific type of head. This further limits the applicability of the parent claim to infringing products. For instance, claim 1 does not specify any particular type of head, and so encompasses all types of head, including MR, GMR, AMR, tunnel junction, etc.

Further, various types of heads, e.g., GMR and tunnel junction, inherently have a different structure. For instance, the sense current passes in a direction parallel to the plane of a CIP head (claim 14), while the sense current passes perpendicular to the plane of deposition in a CPP head (claim 13). Thus, each type of head will have a different structural configuration, from insulation layers to prevent current shunting, to location of leads.

Therefore, claims 12-15 and 26-27 further limit the respective parent claim. Withdrawal of the objection is respectfully requested.

Claims 1-3, 7-18 and 23-27

Claims 1-3, 7-18 and 23-27 have been rejected under 35 USC 112, second paragraph. Claims 1 and 16 have been amended in a manner believed to obviate the rejection under 35 USC 112, second paragraph. Particularly, the offending “being adapted for enhancing” limitation, added in Applicant’s prior response, has been removed. Accordingly, withdrawal of the rejection is respectfully requested.

Because the claims are now present in their original form, it is believed that no additional searching is required.

Claims 1-3, 7-18 and 23-27

Claims 1-3, 7-18 and 23-27 have been rejected under 35 USC 103(a) as being anticipated by Pinarbasi (US6460243) in view of Gill (US6219208).

Submitted herewith is a declaration under 37 CFR 1.131 establishing invention of the subject matter of rejected claims 1-3, 7, 12-13, 16-18 and 26 prior to the effective 35 USC 102(a) date of Pinarbasi (Oct. 8, 2002). Per MPEP 715.02, Applicants may overcome a 35 U.S.C. 103 rejection based on a combination of references by showing completion of the invention by applicant prior to the effective date of any of the references; applicant need not antedate the reference with the earliest filing date. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-3, 7, 12-13, 16-18 and 26 based on Pinarbasi.

Assuming arguendo that the Examiner wishes to pursue a rejection under 35 USC 103(a)/102(e) based on Pinarbasi, such a reference would be overcome under the provisions of 35 USC 103(c).

Pinarbasi issued on Oct. 8, 2002, after the date of invention shown in the attached declaration under 37 CFR 1.131 (Sept. 11-12, 2002). Therefore, the rejection of claims 1-3, 7, 12-13, 16-18 and 26 under 35 USC 103 would be based on 35 USC 102(e) art. Applicants believe that Pinarbasi is disqualified as prior art to the present invention under 35 USC 103(c). Please find attached a statement signed by an attorney of record that Pinarbasi and the present application were both owned by and/or subject to an obligation of assignment to International Business Machines Corporation at the time of invention of the subject matter of the claimed invention in the present application. To support this assertion, a copy of the Patent Abstract of Title from the USPTO Assignments on the Web system showing Pinarbasi was assigned to International Business Machines Corporation until Dec. 31, 2002. Also note the heading "IBM Technical Notebook" listed on the notebook pages submitted with the declaration under 37 CFR 1.131.

Applicants believe that the statement and the supplemental assignment information is sufficient to overcome any evidentiary requirement of the Examiner, particularly in light of the following quotes from MPEP 706.02(I)(2)(II):

The following statement is sufficient evidence to establish common ownership of, or an obligation for assignment to, the same person(s) or organizations(s):

Applications and references (whether patents, patent applications, patent application publications, etc.) will be considered by the examiner to be owned by, or subject to an obligation of assignment to the same person, at the time the invention was made, if the applicant(s) or an attorney or agent of record makes a statement to the effect that the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person.

For example, an attorney or agent of record receives an Office action for Application X in which all the claims are rejected under 35 U.S.C. 103(a) using Patent A in view of Patent B wherein Patent A is only available as prior art under 35 U.S.C. 102(e), (f), and/or (g). In her response to the Office action, the attorney or agent of record for Application X states, in a clear and conspicuous manner, that:

“Application X and Patent A were, at the time the invention of Application X was made, owned by Company Z.”

This statement alone is sufficient evidence to disqualify Patent A from being used in a rejection under 35 U.S.C. 103(a) against the claims of Application X.

Applicants believe that the disqualification of Pinarbasi renders claims 1-3, 7, 12-13, 16-18 and 26 allowable over the references cited in the rejection.

Regarding claims 8-11, 14, 15, 23-25 and 27, Applicant respectfully asserts that the rejection fails the *Graham* test. Specifically, any such rejection would fail the first element of the *Graham* test.

The analysis of obviousness was set forth in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966). In order to establish a *prima facie* case of obviousness, three basic criteria must be met:

First, there must be some *suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings of the references. Second, there must be a *reasonable expectation of success*. Finally, the prior art reference or combined references must teach or suggest *all the claim limitations*. *The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art*, and not based on applicant's disclosure (*In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991; emphasis added).

Regarding the first element of the Graham test, a *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). In the instant case, Pinarbasi indicates that high stress layers cause the lead layers to separate from the sensor, causing an open circuit that destroys the read head. See Pinarbasi col. 2, lines 44-49 and 59-61. Clearly, no one would want the read head to be destroyed. Accordingly, applying the rule of *In re Geisler*, it is clear that Pinarbasi teaches away from using Rh as a compression layer *in a material way*. Thus, the rejection based on Pinarbasi violates the rule of *In re Geisler*.

Nor can it be said that the references would suggest the invention as a whole to those of ordinary skill at the time the invention was made, particularly where the invention requires compression layers providing compressive stress to the sensor. Any assertion that the references suggest a structure having all of the claim limitations would be predicated on impermissible hindsight reconstruction based on Applicant's disclosure. The patent examination rules require that the content of the prior art is determined at the time the invention was made. The requirement "at the time the invention was made" is to avoid impermissible hindsight. Consider the following quote:

"It is difficult but necessary that the decisionmaker forget what he or she has been taught . . . about the claimed invention and cast the mind back to the time the invention was made (often as here many years), to occupy the mind of one

skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art.” *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

In the instant case, those skilled in the art at the time the present invention was made did not recognize the importance of the effect of a compression layer on an AP pinned layer structure, as required by the claimed invention. It was this insight that helped the inventor conceive of the claimed invention which overcomes the deficiencies in the prior art. “Because that insight was contrary to the understandings and expectations of the art, the structure effectuating it would not have been obvious to those skilled in the art.” *Schenck v. Nortron Corp.*, 713 F.2d at 785, 218 USPQ at 700 (citations omitted).

As evidence that Applicant’s insight was contrary to the understandings and expectations of the art, the Examiner is directed to Pinarbasi col. 2, lines 59-61 and 64-65. As noted there, layers of high stress are identified as destroying entire read heads. Again, no one skilled in the art wants to risk destruction of the head.

As further evidence that Applicant’s insight was contrary to the understandings and expectations of the art, Applicant uses such a layer to actually induce compressive stress, in direct contravention of the teaching of Pinarbasi.

Accordingly, per the rule of *Schenck, supra*, because Applicant’s insight was contrary to the understandings and expectations of the art, the claimed structure effectuating it would not have been obvious to those skilled in the art.

Because the *Graham* test is not met, allowance of claims 9-11, 14, 15, 23-25 and 27 is respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-2587 (Order No. HSI920030164US1).

Respectfully submitted,

By: /Dominic M. Kotab/

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Date: March 19, 2007

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**STATEMENT BY ATTORNEY OF RECORD ESTABLISHING COMMON
OWNERSHIP OF THE PRESENT APPLICATION AND U.S. PATENT NO.
6,460,243 TO PINARBASI AT TIME OF INVENTION**

Dear Examiner:

The present application having serial no. 10/934,713 to Gill and U.S. Patent No. 6,460,243 to Pinarbasi was, at the time the invention of the present application was made, owned by and/or under subject to an obligation of assignment to the same entity, International Business Machines Corporation.

Respectfully submitted,

/Dominic M. Kotab/

Dominic Kotab, Attorney of Record
Reg. No. 42,762

[illegible]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: GILL.

Application No.: 10/627,506

Group No.: 2627

Filed: July 25, 2003

Examiner: MILLER, Brian E.

For: STRUCTURE PROVIDING ENHANCED SELF-PINNING FOR CPP GMR AND TUNNEL VALVE HEADS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

DECLARATION OF PRIOR INVENTION IN THE UNITED STATES
OR IN A NAFTA OR WTO MEMBER COUNTRY
TO OVERCOME CITED PATENT OR PUBLICATION (37 C.F.R. § 1.131)

PURPOSE OF DECLARATION

1. This declaration is to establish completion of the invention of this application in the United States at a date prior to Oct. 8, 2002, that is the effective date of the prior art publication that was cited by the Examiner.
2. The persons making this declaration are the inventors.

CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10*

(When using Express Mail, the Express Mail label number is mandatory;
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

deposited with the United States Postal Service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

37 C.F.R. § 1.8(a)

with sufficient postage as first class mail.

37 C.F.R. § 1.10*

as "Express Mail Post Office to Addressee"

Mailing Label No. (mandatory)

TRANSMISSION

facsimile transmitted to the Patent and Trademark Office, (703)

Signature

Date:

(type or print name of person certifying)

* Only the date of filing ("1.8") will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under "1.8 continues to be taken into account in determining timeliness. See "1.703(f). Consider "Express Mail Post Office to Addressee" ("1.10) or facsimile transmission ("1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

FACTS AND DOCUMENTARY EVIDENCE

3. As evidence of the date of conception of the invention of this application, the following attached documents and/or models are submitted as evidence:

STATEMENT: I hereby state that conception of the invention in the above-identified patent application was made prior to Oct. 8, 2002, as supported by Exhibit A. Exhibit A, dated Sept. 11-12, 2002, shows notebook pages prepared by the inventor. I state that the concepts and features described in Exhibit A were conceived and documented by the inventor prior to Oct. 8, 2002.

EXHIBIT A: copy of notebook pages 51-53 dated Sept. 11, 2002 and Sept. 12, 2002.

Exhibit A demonstrates that the subject matter of claims 1-3, 7, 12-13, 16-18 and 26 were in the inventor's possession at least as early as Sept. 12, 2002.

The sensor having an AP pinned layer structure element of claims 1-3, 7, 12-13, 16-18 and 26 are shown on pp. 51 and 53 of the notebook.

The pair of compression layers element of claims 1-3, 7, 12-13, 16-18 and 26 are shown on p. 51 of the notebook.

Rhodium (metal) compression layers are shown on p. 51 of the notebook, per claims 2, 3, 17, 18.

The Rh compression layers are positioned substantially outside the track edges of the sensor as shown on p. 51 of the notebook, per claims 7, 16, 17, 18, 26.

The head shown on p. 51 of the notebook is a CPP GMR sensor, per claims 12, 13, 26.

From these Exhibits and statement, it can be seen that the invention claimed in the noted claims was made prior to Oct. 8, 2002.

DILIGENCE

4. It is hereby declared that Applicants acted diligently up to reduction of practice or the filing date of the present patent application.

TIME OF PRESENTATION OF THE DECLARATION

5. This declaration is submitted prior to final rejection, or with a first or supplementary first reply after a final rejection for the purpose of overcoming a new ground of rejection or requirement made by the examiner, in which case the declaration is considered timely and should be considered. See MPEP 715.09(c).

DECLARATION

6. As a person signing below:

I hereby declare that the documents attached hereto disclose the subject matter of currently pending claims 1-3, 7, 12-13, 16-18 and 26 of the subject patent application. I also declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

Printed Full Name of

the Inventor:

Hardayal Singh Gill

Citizenship:

USA

Inventor's signature:

H S. Gill

Date of Signature:

2/22/07

Residence:

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(State/Country)

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EXHIBIT A

Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—
37 C.F.R. section 1.131--page 4 of 4

and sign every entry. Have every possibly important witnessed. Submit an invention Disclosure of ing possibly new and inventive.

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IBM Technical Notebook

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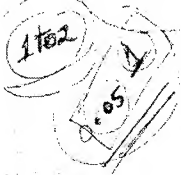
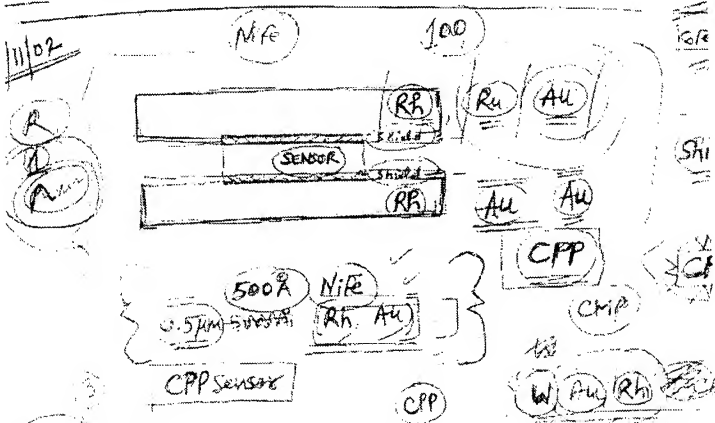
51

Other options of R & L to up for: for thinner gap design

[1] SPC Thinner PEM (60 Å, 90 Å, 120 Å)

[2] Rh lead & high Fe content CoFe for Pmin by (P3 - CoFe23) to up Pmin (CoFe4)

[3] Imax undr. res. next CP



Special lead structure for CPP sensor
 => Low contact resistance
 => High resistance

CP 51

Pinning

IBM Technical Notebook

[illegible]

70 DO

- 8 PM
- 9 PM
- 2009 ? (new state for)
- List of inputs for key steps.
- new steps.
- new design ? ?
- Perp. Acc design

CoFe
Ru
CoFe

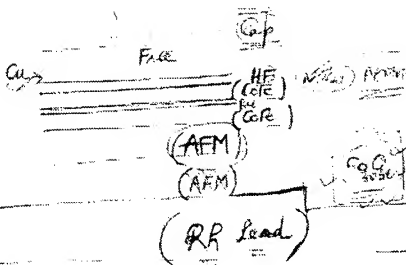
Fig 04

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IBM Technical Notebook

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[Cu / Au / HE / Cap]

12/02

Gold Lead Rocky Expt

- 100% "P" Cap milled from active area
- TAO 150 Å on HG
- HG (5 x 5)
- Au stress less than TAO (Sign)
- Au stress
- TAO stress (Sign)
- (Au stress) compression

9.0022
 9.0076
 9.0071
 9.0025
 9.0010
 9.0072